

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/009030

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01Q1/24 H01Q9/04 H04M1/02 H04B1/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01Q H04M H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 272 356 B1 (DOLMAN RODNEY A ET AL) 7 August 2001 (2001-08-07) column 5, line 24 - column 6, line 3; figure 3	1,13
A	EP 1 329 981 A (SAMSUNG ELECTRONICS CO LTD) 23 July 2003 (2003-07-23) paragraphs '0016! - '0027!; figures 3-5	1,13
A	US 5 561 437 A (KRENZ ERIC L ET AL) 1 October 1996 (1996-10-01) abstract; figure 1	1,13
A	EP 1 107 352 A (NOKIA MOBILE PHONES LTD) 13 June 2001 (2001-06-13) paragraphs '0011! - '0017!; figure 1	1,13
	-/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *O* document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search

1 October 2004

Date of mailing of the international search report

11/10/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 93/18591 A (MOTOROLA INC) 16 September 1993 (1993-09-16) page 3, line 14 - page 4, line 23; figure 1</p> <p>-----</p>	1, 13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/009030

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6272356	B1	07-08-2001	NONE	
EP 1329981	A	23-07-2003	KR 2003062624 A CN 1433103 A EP 1329981 A2 US 2003137468 A1	28-07-2003 30-07-2003 23-07-2003 24-07-2003
US 5561437	A	01-10-1996	BR 9504663 A CA 2156353 A1 CN 1130854 A ,B DE 19532127 A1 FR 2724771 A1 GB 2293275 A ,B JP 8097622 A KR 184927 B1 SG 32495 A1	08-10-1996 16-03-1996 11-09-1996 28-03-1996 22-03-1996 20-03-1996 12-04-1996 15-05-1999 13-08-1996
EP 1107352	A	13-06-2001	FI 992611 A EP 1107352 A2 US 2001002825 A1	04-06-2001 13-06-2001 07-06-2001
WO 9318591	A	16-09-1993	WO 9318591 A1	16-09-1993